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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,079

08/30/2006

Hirokazu Miyazawa

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SUGHRUE MION, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
SUITE 800  
WASHINGTON, DC 20037

EXAMINER

KATCOFF, MATTHEW GORDON

ART UNIT

PAPER NUMBER

4137

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,079	<b>Applicant(s)</b> MIYAZAWA ET AL.	
	<b>Examiner</b> Matthew G. Katcoff	<b>Art Unit</b> 4137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 8/30/2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 2-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) 1 and 9-14 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/30/2006, 07/13/2007</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Priority***

1. Should applicant desire to obtain the benefit of foreign priority under 35 U.S.C. 119(a)-(d) prior to declaration of an interference, a certified English translation of the foreign application must be submitted in reply to this action. 37 CFR 41.154(b) and 41.202(e).

Failure to provide a certified translation may result in no benefit being accorded for the non-English application.

### ***Election/Restrictions***

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group 1, claim(s) 1, 9-11, drawn to the product.

Group 2, claim(s) 2-8, drawn to the method of producing rounded fused alumina particles.

Group 3, claim(s) 12-14, drawn to the method for producing a resin or rubber composition.

2. The inventions listed as Groups 1, 2 and 3 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: While the groups share the same common technical feature, roundish fused alumina particles, this

Art Unit: 4137

technical feature is not a special technical feature as it does not make a contribution over the prior art in view of U.S. Patent No. 6,261,484 B1 which discloses making roundish fused spherical alumina particles (column 1, lines 39-55). These particles are 10-200 $\mu$ m (column 1 lines 26-27).

3. This application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

If Group 1 or Group 3 is elected, then an election of species is required. Select one of:

Species 1: A resin composition

Species 2: A rubber composition

Both species are disclosed on page 7, lines 36-37.

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Art Unit: 4137

4. The claims are deemed to correspond to the species listed above in the following manner: Claims 9, 11, 12 and 14 correspond to Species 1; Claims 10 and 13 correspond to Species 2. None of the claims are generic.

5. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons: The use of resin excludes the use of rubber and these are not variants of one another.

6. During a telephone conversation with Sheldon Landsman on 04 June 2009 a provisional election was made with traverse to prosecute the invention of the elected Group 2, claims 2-8. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1, 9-14 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### ***Claim Objections***

7. Claims 2-8 are objected to because of the following informalities: These claims are dependent on claim 1 which is not included in the restriction group chosen.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 4137

9. Claims 2-4, 6 and 8 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,888,258 to Kaaber (*Kaaber*) in view of U.S. Patent No. 6,139,990 to Kubota et. al. (*Kubota*).

Concerning claim 2, *Kaaber* discloses using a jet mill to reduce the size of alumina particles to a size of no more than 100µm (see example 2). However it does not disclose using the jet mill to round the particles.

*Kubota*, a method of modifying graphite particles, discloses using a jet mill to collide particles (column 5, lines 14-16) to reduce particle size to 1 to 100µm (column 5, lines 10-11) and round the particles to a roundness of not less than 0.86 (column 4, lines 4-5).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the reducing and rounding steps disclosed by *Kubota* with the steps of milling alumina disclosed by *Kaaber* because this just using known techniques to improve a product in the same manner. Further, both methods involve using a jet mill thus this is a simple addition of known steps using the same apparatus.

Concerning claim 3, the steps claimed are encompassed by claim 2 since *Kubota* causes the collisions with a jet mill; thus claim 3 is rejected for at least the same reasons as claim 2 is rejected.

Concerning claim 4, the steps claimed are encompassed by claim 3 since the jet mill disclosed by *Kubota* reduces particle size and rounds the particles by

Art Unit: 4137

colliding the particles (column 5, lines 14-16), thus it is a counter-flow jet mill; thus claim 4 is rejected for at least the same reasons as claim 3 is rejected.

Concerning claim 6, the steps claimed are encompassed by claim 4 since it is inherent in a jet mill that one can arbitrarily control the nozzle pressure, rotation speed of the classifier and the operation time; thus claim 6 is rejected for at least the same reasons as claim 4 is rejected.

Concerning claim 8, the steps claimed are encompassed by claim 4 since *Kubota* discloses using the jet mill in a batch operation (column 5, lines 62-63); thus claim 8 is rejected for at least the same reasons as claim 4 is rejected.

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Kaaber* in view of *Kubota* as applied to claim 3 above, and further in view of U.S. Patent No. 3,837,583 to Kugelberg et. al. (*Kugelberg*).

Concerning claim 5, the steps disclosed by *Kaaber* and *Kubota* does not disclose the jet mill being a rotational flow type.

*Kugelberg*, a multi-stage jet mill, discloses using rotational flow to mill particles in a jet mill (column 1, lines 18-21).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the rotational flow jet mill with the steps disclosed by *Kaaber* and *Kubota* because this is a simple substitution of one type of jet mill for another which operates in the same manner.

Art Unit: 4137

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Kaaber* in view of *Kubota* as applied to claim 4 above, and further in view of U.S. Patent No. 5,421,524 to Haddow (*Haddow*).

Concerning claim 7, the method disclosed by *Kaaber* in view of *Kubota* does not disclose the nozzle pressure of the jet mill.

*Haddow*, a method milling, discloses using a jet mill with a nozzle pressure of 0.5 to 1MPa (column 3, lines 29-31).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the nozzle pressure disclosed by *Haddow* with the steps disclosed by *Kaaber* and *Kubota* because using this pressure is common in the art and the result is predictably the same.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew G. Katcoff whose telephone number is (571) 270-1415. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Jackson can be reached on (571) 272-4697. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 4137

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. G. K./  
Examiner, Art Unit 4137  
06/05/09

/Gary Jackson/  
Supervisory Patent Examiner  
Art Unit 4137